

5

10

ABSTRACT

15 Apparatus and method for enhancing combustion comprises
an enclosure defining an opening for introduction of a gas and
openings for the introduction of air, with a nozzle in the opening for
introduction of a fuel gas into the enclosure. First and second electrodes are
located in the enclosure, the first and second electrodes being coated with
20 dielectric material, and being connected to an electrical power supply. With
electrical power applied to the first and second electrodes and with the fuel
gas sprayed into the enclosure, an atmospheric pressure plasma created by a
dielectric barrier discharge is produced in the enclosure that cracks the fuel
gas prior to its mixing with air introduced through the openings for the
25 introduction of air.

30